

# New or little known platygastrids (Hymenoptera: Platygastriidae)

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**Abstract.** Six new species, viz. *Leptacis longiciliata* (from Guinea-Bissau), *Platygaster costaricae*, *P. flabellata*, *P. hanssoniana*, *Synopeas acuticornis* (all from Costa Rica), and *S. guatemalae* (from Guatemala) are described. The hitherto unknown male of *Platygaster laricis* Haliday, and the hitherto unknown female of *P. striatidorsum* Buhl are described.

**Samenvatting.** Nieuwe of slecht bekende platygastriden (Hymenoptera: Platygastriidae). Zes nieuwe soorten, nl. *Leptacis longiciliata* (uit Guinea-Bissau), *Platygaster costaricae*, *P. flabellata*, *P. hanssoniana*, *Synopeas acuticornis* (alle uit Costa Rica) en *S. guatemalae* (uit Guatemala) worden beschreven. Het tot nu toe onbekende mannetje van *Platygaster laricis* Haliday, en het tot nu toe onbekende wijfje van *P. striatidorsum* Buhl worden beschreven.

**Résumé.** Platygastrides nouveaux ou peu connus (Hymenoptera: Platygastriidae). Six espèces nouvelles, *Leptacis longiciliata* (de Guinée-Bissau), *Platygaster costaricae*, *P. flabellata*, *P. hanssoniana*, *Synopeas acuticornis* (tous de Costa Rica), et *S. guatemalae* (de Guatemala) sont décrites. Le mâle (jusqu'à présent inconnu) de *Platygaster laricis* Haliday, et la femelle (jusqu'à présent inconnue) de *P. striatidorsum* Buhl sont décrits.

**Key words.** Hymenoptera – Platygastriidae – new species – West Africa – Central America

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All the specimens treated below are preserved in the Museum of Zoology, Lund University (Sweden). They were part of a loan by courtesy of curator Roy Danielsson whom I thank for the loan of the material.

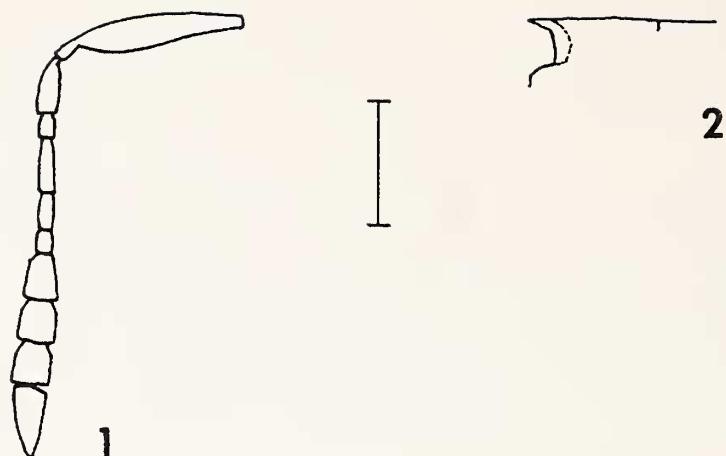
## *Leptacis longiciliata* sp. nov. (figs. 1–2)

Material examined. Holotype ♀: Guinea-Bissau, Regiao Cacheu, 2 km E Bigene, 1.XI.1992 (M. Söderlund).

Description. Female: Length 0.6 mm. Colour dark brown, head almost black; A1–A2 and legs yellowish, A3–A10 more or less brown.

Head from above 1.8× as wide as long, 1.2× as wide as thorax, distinctly and rather uniformly reticulate with large meshes, without occipital carina; lateral ocelli separated from eye by slightly less than their diameter, LOL = 3 OOL. Head from front hardly 1.2× as wide as high. Antenna (fig. 1) with A1 slightly shorter than height of head (18:19).

Mesosoma 1.6× as long as wide, almost 1.2× as high as wide. Sides of pronotum smooth except for reticulation in upper anterior corner. Mesoscutum almost smooth, with rather sparse hairs, without notaui; hind margin semitransparent, not raised but slightly convex, on each side of scutellum with dense hairs. Mesopleura smooth except for about seven fine longitudinal lines in upper third. Scutellum (fig. 2) sculptured and hairy as mesoscutum, behind with a short pale spine and a vertical lamella below. Metapleura smooth and bare except for fine pubescence posteriorly. Propodeal carinae low and straight, slightly semitransparent.



Figs. 1–2. *Leptacis longiciliata* sp. nov. ♀: 1.—antenna, 2.—scutellum and propodeum, lateral view (reference bar 0.10 mm).

Fore wing hardly shorter than body,  $3.4 \times$  as long as wide, almost clear, rather densely covered by short hairs; longest marginal cilia 0.5 width of wing. Hind wing about 10x as long as wide; marginal cilia  $1.5 \times$  width of wing.

Metasoma hardly longer than mesosoma (15:14), about as wide as this,  $1.7 \times$  as long as wide. T1 about  $1.5 \times$  as wide as long, medially with a distinct transverse impression, rest smooth except for a few weak longitudinal carinae in posterior half; T2 smooth; T3–T6 very short.

Comments: Differs from *Leptacis microcera* Buhl, 2003 from Sierra Leone e.g. in stronger sculptured head without occipital carina, and in denser hairy wings with longer marginal cilia, cf. Buhl (2003). Runs to *L. nana* Masner, 1960 from Madagascar in Masner's (1960) key to females of African *Leptacis*, but *nana* has mesoscutum almost hairless and T1 nearly square in shape. Masner (1960) also describes *L. pumilio* Masner, 1960 from Madagascar, but only in the male sex. This species differs from *L. longiciliata* at least in shape of scutellum, cf. Masner (1960).

### *Platygaster costaricae* sp. nov. (figs. 3–6)

Material examined. Holotype ♀: Costa Rica, Cartago, Parque Nacional Tapantí, 1200–1500m ( $9^{\circ}45'N$   $83^{\circ}47'W$ ), 20.III.–10.IV.2000 (C. Hansson & D. Rubi).

Description. Female: Length 1.6 mm. Colour black, antennae and legs dark brown; A1 basally, trochanters, femora basally, both ends of tibiae, and all tarsi light brown.

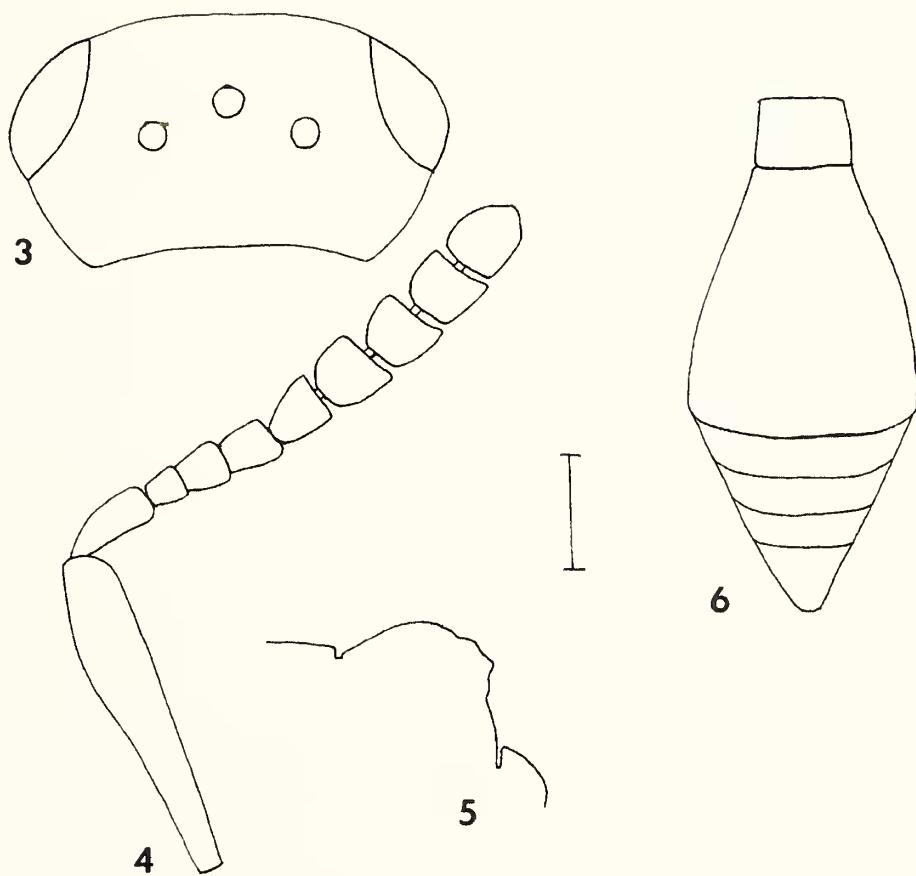
Head from above (fig. 3)  $2.0 \times$  as wide as long, as wide as thorax; occiput finely transversely striated, vertex with numerous distinct hair-implantations and fine reticulation; frons smooth, with a couple of transverse wrinkles just above antennae; eyes distinctly hairy; OOL:LOL = 4:3. Head from front  $1.2 \times$  as wide as high. Antenna (fig. 4) with A1  $0.9 \times$  as long as height of head.

Mesosoma  $1.4 \times$  as long as wide, very slightly higher than wide. Sides of pronotum smooth except for some fine reticulation antero-medially, with numerous distinct hairs posteriorly and in upper half. Mesoscutum finely

reticulate-coriaceous anteriorly, rest smooth but uniformly and rather densely hairy, without notauli; hind margin medially with a short and narrow prolongation which is slightly raised. Mesopleura smooth. Scutellum (fig. 5) at level of mesoscutum, distinctly reticulate-coriaceous and densely hairy, behind somewhat uneven and almost vertical. Metapleura smooth and bare except for a few scattered setae. Propodeal carinae well separated, smooth and shiny area between them about as long as wide.

Fore wing  $0.9\times$  as long as body,  $2.7\times$  as long as wide, distinctly brownish and much hairy; marginal cilia at most 0.15 width of wing. Hind wing  $5.3\times$  as long as wide, with two frenal hooks; marginal cilia one-third the width of wing.

Metasoma (fig. 6)  $1.1\times$  as long as head and mesosoma combined, very slightly wider than thorax. T1 strongly and uniformly crenulated, bare dorsally. T2 medially striated to 0.15, in basal foveae to 0.40; T3–T6 smooth, each with a transverse row of rather deeply implanted long hairs.



Figs. 3–6. *Platygaster costaricae* sp. nov. ♀: 3.—head, dorsal view, 4.—antenna, 5.—scutellum and propodeum, lateral view, 6.—metasoma, dorsal view (reference bar 0.10 mm for figs. 3–5, 0.20 mm for fig. 6).

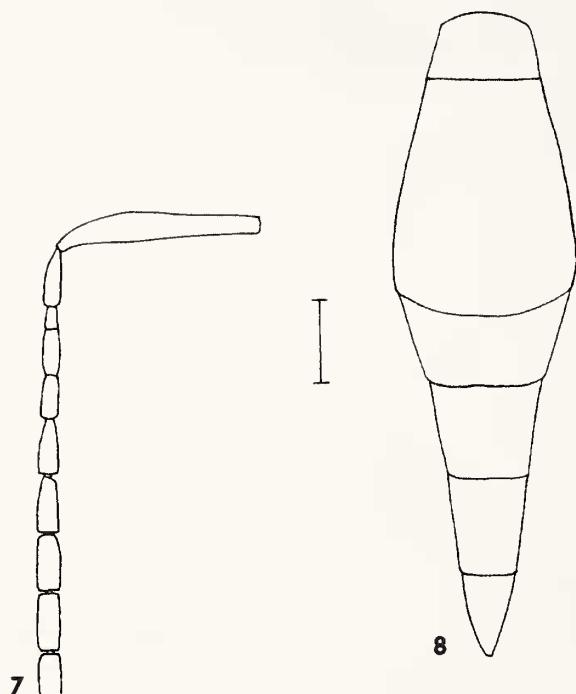
**Comments:** This species, named after its country of origin, seems to be rather similar to Nearctic *P. victoriae* MacGown, 1979 which, however, has OOL shorter than LOL and flagellar segments more slender than in *P. costaricae*, cf. MacGown (1979).

*Platygaster flabellata* sp. nov. (figs. 7–8)

Material examined. Holotype ♀: Costa Rica, Cartago, Parque Nacional Tapantí, 1200–1500m (9°45'N 83°47'W), 20.III.–10.IV.2000 (C. Hansson & D. Rubi).

Description. Female: Length 1.4 mm. Colour black, antennae hardly lighter; legs dark brown, both ends of tibiae and base of tarsi light brownish.

Head from above 2.0× as wide as long, 1.1x as wide as thorax; entire frons finely fan-like striated; vertex between ocelli transversely striated, ocellocular space longitudinally striated; occiput rounded, rather strongly transversely striated. Lateral ocelli separated from eyes by 1.25× their longer diameter; OOL and LOL about equal. Head from front 1.25× as wide as high. Antenna (fig. 7) with A1 slightly shorter than height of head (16:17).



Figs. 7–8. *Platygaster flabellata* sp. nov. ♀: 7.—antenna, 8.—metasoma, dorsal view (reference bar 0.10 mm).

Mesosoma 1.5× as long as wide, 1.1× as high as wide. Sides of pronotum finely longitudinally reticulate-coriaceous all over. Mesoscutum somewhat roughly longitudinally reticulate-coriaceous with rather dense hairs; notauli weak, missing in about anterior 0.3; mid lobe bluntly prolonged to base of scutellum; scuto-scutellar grooves wide, densely hairy. Mesopleura smooth. Scutellum evenly convex, above level of mesoscutum, virtually smooth except for rather dense hair-implantations. Metapleura with whitish pilosity all over. Propodeal carinae short and dark, area between them smooth and much transverse.

Fore wing just overreaching tip of metasoma, 2.4× as long as wide, with yellowish tint, dense hairs and short marginal cilia. Hind wing 5.9× as long as wide, with two frenal hooks; marginal cilia one-third the width of wing.

Metasoma (fig. 8) 1.4× as long as head and mesosoma combined, 0.75× as wide as thorax. T1 strongly crenulated, T2 striated in basal foveae to 0.3, medially with a couple of very short wrinkles at base. T3 smooth medially, at sides with numerous rather scattered deeply implanted hairs. T4–T5 with some scattered deeply implanted hairs and longitudinal rugosity, smooth along margins. T6 with very faint longitudinal rugosity, almost smooth, and with a few hairs. Large sternite without hump anteriorly.

Comments: Runs to *P. leguminicolae* Fouts, 1920 and *P. oenone* Fouts, 1925 in MacGown's unpublished key to *Platygaster* of the United States, but these species have metasoma differently shaped and sculptured than in *P. flabellata*, and flagellar segments less elongate. The same characters separate *flabellata* from the similar Palaearctic species *P. demades* Walker, 1835, *P. orcus* Walker, 1835, and *P. pelias* Walker, 1835, cf. Fouts (1920, 1925) and Vlug (1985).

### *Platygaster hanssoniana* sp. nov. (figs. 9–11)

Material examined. Holotype ♀: Costa Rica, Cartago, Parque Nacional Tapantí, 1200–1500m (9°45'N 83°47'W), 20.III.–10.IV.2000 (C. Hansson & D. Rubi). Paratypes: 2♂ same data.

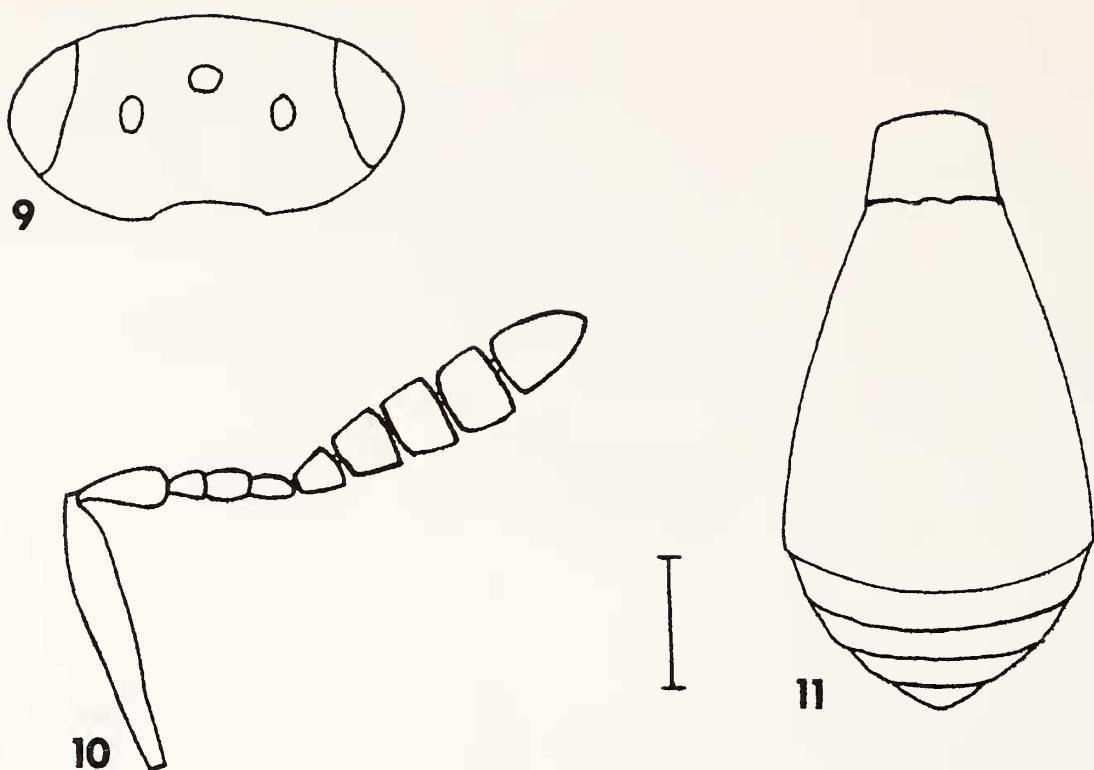
Description. Female: Length 1.0 mm. Colour black; A1 and legs dark brown; both ends of fore tibia, base of middle and hind tibiae, and segments 1–4 of all tarsi yellowish brown.

Head shiny, from above (fig. 9) 2.1× as wide as long, 1.1× as wide as thorax; frons in lower half finely transversely striate-reticulate, in upper half feebly reticulate with large meshes; vertex reticulate with small meshes; occiput narrowly rounded, distinctly transversely striated all over. OOL and LOL equal. Head from front 1.2× as wide as high, antenna (fig. 10) with A1 shorter than height of head (7:8), A9 1.2× as wide as long.

Mesosoma 1.4× as long as wide, 1.1× as high as wide. Sides of pronotum smooth along hind margin and in slightly more than lower half, rest longitudinally reticulate. Mesoscutum shiny, superficially but distinctly reticulate, in posterior third smooth, with notauli indicated in posterior third; hairs much denser in posterior half than in anterior half; mid lobe slightly prolonged to base of scutellum; scuto-scutellar grooves with dense hairs. Mesopleura smooth. Scutellum low, slightly convex, at level of mesoscutum, smooth except for dense hair-implantations. Metapleura with whitish pilosity all over. Propodeal carinae low, dark and parallel, transverse area between them smooth.

Fore wing 0.95× as long as body, 2.5× as long as wide, densely hairy and with faint brownish tint; marginal cilia at their longest 0.1 width of wing. Hind wing 6.0× as long as wide, with two frenal hooks; marginal cilia hardly one-third the width of wing.

Metasoma (fig. 11) longer than mesosoma (13:12), hardly 0.9× as wide as this. T1 strongly and evenly crenulated. T2 basally with deep and narrow striated foveae to half of length, medially with two strong longitudinal furrows to one-fifth of length. T3–T6 smooth, each with a few rather superficially implanted hairs.



Figs. 9–11. *Platygaster hanssoniana* sp. nov. ♀: 9.—head, dorsal view, 10.—antenna, 11.—metasoma, dorsal view (reference bar 0.10 mm).

Male: 0.9 mm approx. Sculpture of head and mesoscutum somewhat rougher than in female, e.g. mesoscutum not smooth posteriorly. Antenna with A4 widened, twice as wide as A3, as long as A5; A5–A9 about equal, each 1.5–1.6× as long as wide, flagellar pubescence about two-thirds the width of segments.

Comments: Named after one of the collectors. Differs from the Neotropical species of *Platygaster* treated by Kieffer (1926) in the wide preapical antennal segments of female. Runs to *P. rhabdophagae* MacGown, 1979 and *P. astericola* (Ashmead, 1893) in MacGown's unpublished key to *Platygaster* of the United States, but these species have preapical antennal segments at least as long as wide, differently sculptured metasoma, etc., cf. Fouts (1924) and MacGown (1979).

### *Platygaster laricis* Haliday, 1835 (fig. 12)

Material examined: 1♂, Sweden, Öl., Halltorp 7.VIII.1967 (A. Sundholm).

Description of the hitherto unknown male: Length 1.2 mm. Head from above 1.8× as wide as long. Antenna (fig. 12) with A4 unusually large, A1–A4 yellowish brown, A5–A10 darker brown. Otherwise as female described by Vlug (1985).

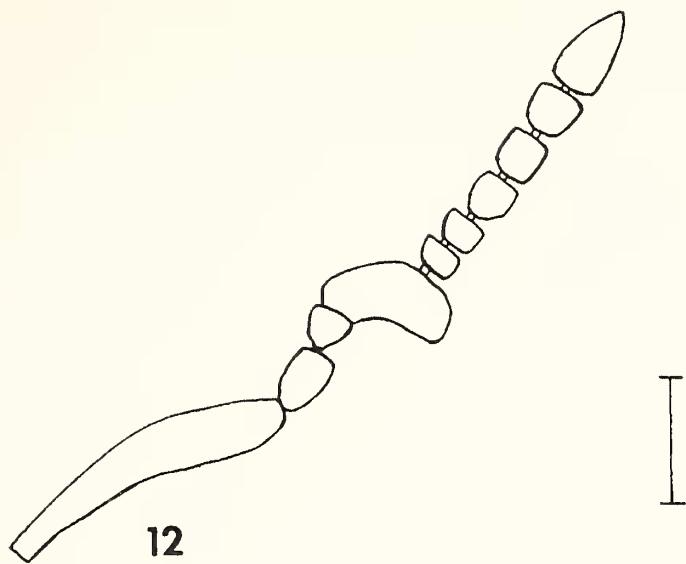


Fig. 12. Antenna of *Platygaster laricis* Haliday, 1835 ♂ (reference bar 0.10 mm).

### ***Platygaster striatidorsum* Buhl, 1998 (figs. 13–14)**

New material examined (2♀, 4♂): 2♀, Sweden, Gotl., Lärbro 4. VIII.1963 and Hanguar 9.VIII.1963; 3♂, Sweden, Bl., Torhamn 25.VII.1969; 1 male, Bl., Rödeby, Gagnekulla 29.VII.1969. (A. Sundholm).

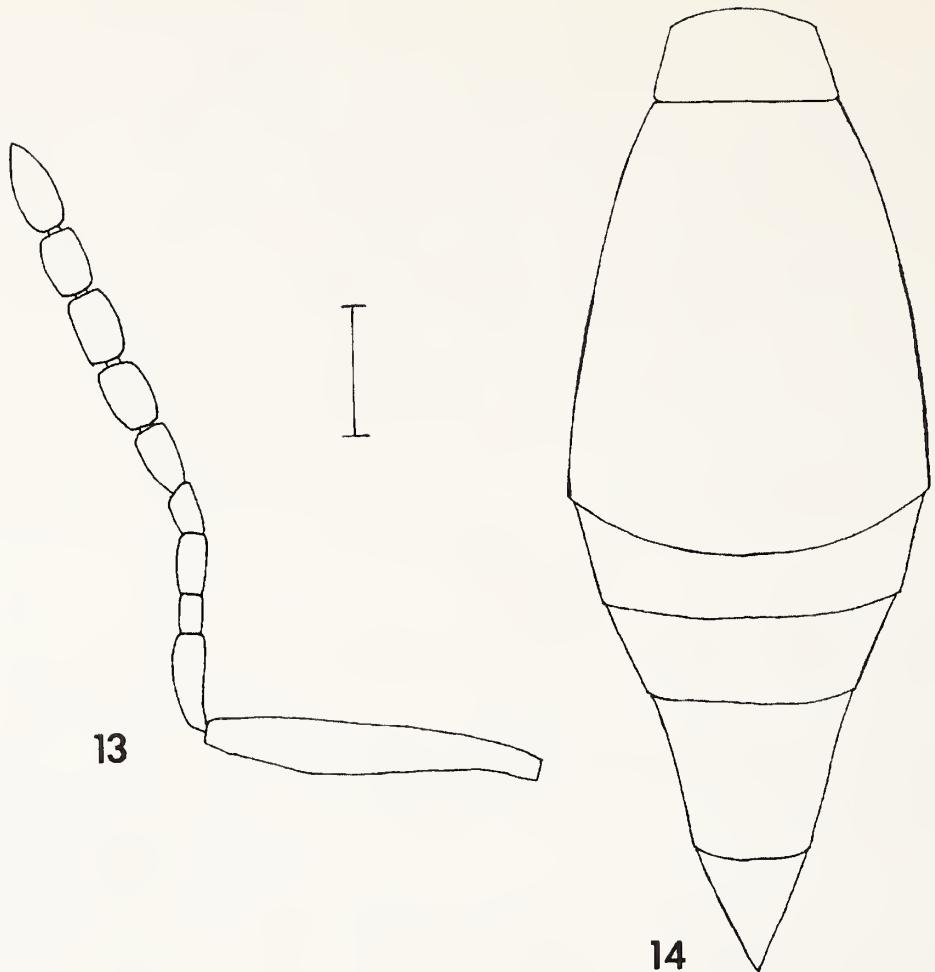
Description of the hitherto unknown female: Length 1.4–1.7 mm. Antenna (fig. 13) with A7–A9 each 1.5× as long as wide. Metasoma (fig. 14) 1.1× as long as head and mesosoma combined. T2 striated in basal foveae to about 0.5 of length, medially with shorter striae. Large sternite without hump. T3–T4 smooth, each with a medially interrupted transverse row of rather superficially implanted fine hairs; T5 with longitudinal rugosity, smoother medially and behind; T6 smooth with a few hairs. Rest of characters as in male described from Sweden by Buhl (1998).

### ***Synopeas acuticornis* sp. nov. (figs. 15–18)**

Material examined. Holotype ♀: Costa Rica, Cartago, Parque Nacional Tapantí, 1200–1500m (9°45'N 83°47'W), 20.III.–10.IV.2000 (C. Hansson & D. Rubi).

Description. Female: Length 1.1 mm. Colour black; A1–A6 and legs dark brown; most of fore tibia, basal half of middle and hind tibiae, and segments 1–4 of fore and middle tarsi lighter.

Head from above (fig. 15) 1.9× as wide as long, 1.1× as wide as thorax, finely and more or less transversely reticulate-coriaceous, occiput rather sharply angled, with traces of carina; lateral ocelli separated from eye by 1.25× their diameter; LOL = 1.7 OOL. Head from front hardly 1.2× as wide as high; antenna (fig. 16) with A1 0.8× height of head.



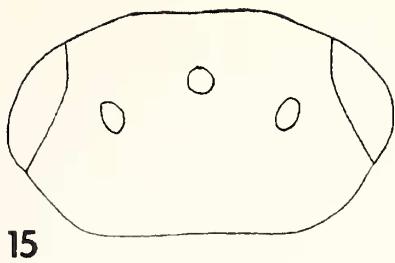
Figs. 13–14. *Platygaster striatidorsum* Buhl, 1998 ♀: 13.—antenna, 14.—metasoma, dorsal view (reference bar 0.10 mm).

Mesosoma 1.4× as long as wide, 1.1× as high as wide. Sides of pronotum finely reticulate-coriaceous and hairy in upper half, rest smooth. Mesoscutum rather uniformly reticulate-coriaceous and densely hairy, without notauli but mid lobe posteriorly slightly raised and prolonged, not semitransparent; scutellellar grooves wide, smooth and hairy. Mesopleura smooth. Scutellum (fig. 17) densely hairy and somewhat more rugose than mesoscutum, with a fine semitransparent tooth and a narrow vertical lamella below. Metapleura with whitish pilosity all over. Propodeal carinae fused, smooth, semitransparent, high and slightly curved.

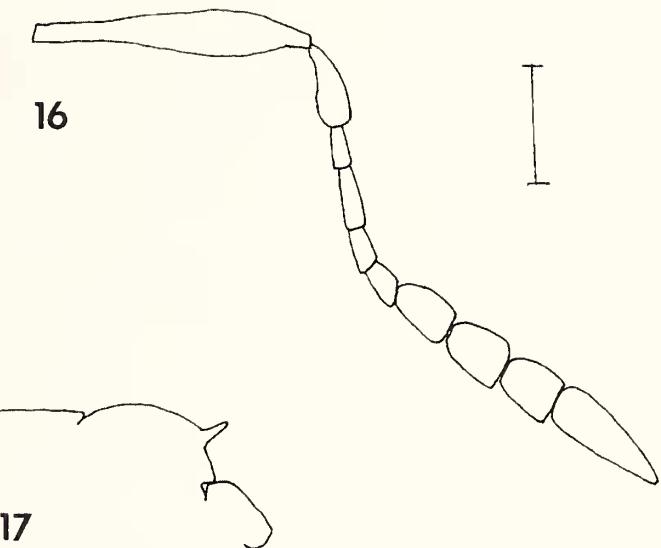
Fore wing fully as long as entire body, nearly 2.6× as long as wide, with very faint brownish tint and densely hairy; marginal cilia at their longest slightly more than 0.1 width of wing. Hind wing 5.7× as long as wide; marginal cilia 0.4 width of wing.

Metasoma (fig. 18) as long as head and mesosoma combined, narrower than thorax (8:9), wider than high (8:7). T1–T2 smooth, T3–T6 faintly reticulate and with some superficially implanted hairs.

Comments: A very distinct species on account of pointed A10 which is fully 2.5× as long as wide.

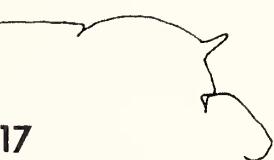


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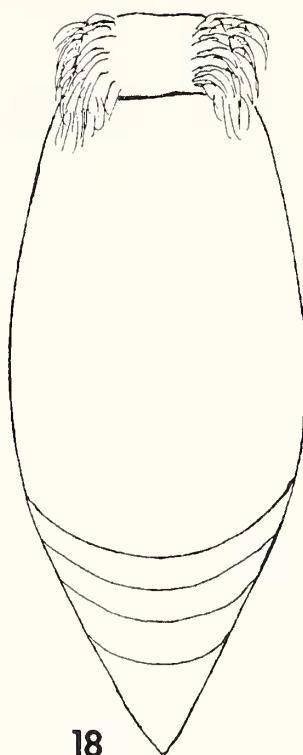


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Figs. 15–18. *Synopeas acuticornis* sp. nov. ♀: 15.—head, dorsal view. 16.—antenna. 17.—scutellum and propodeum, lateral view, 18.—metasoma, dorsal view (reference bar 0.10 mm).

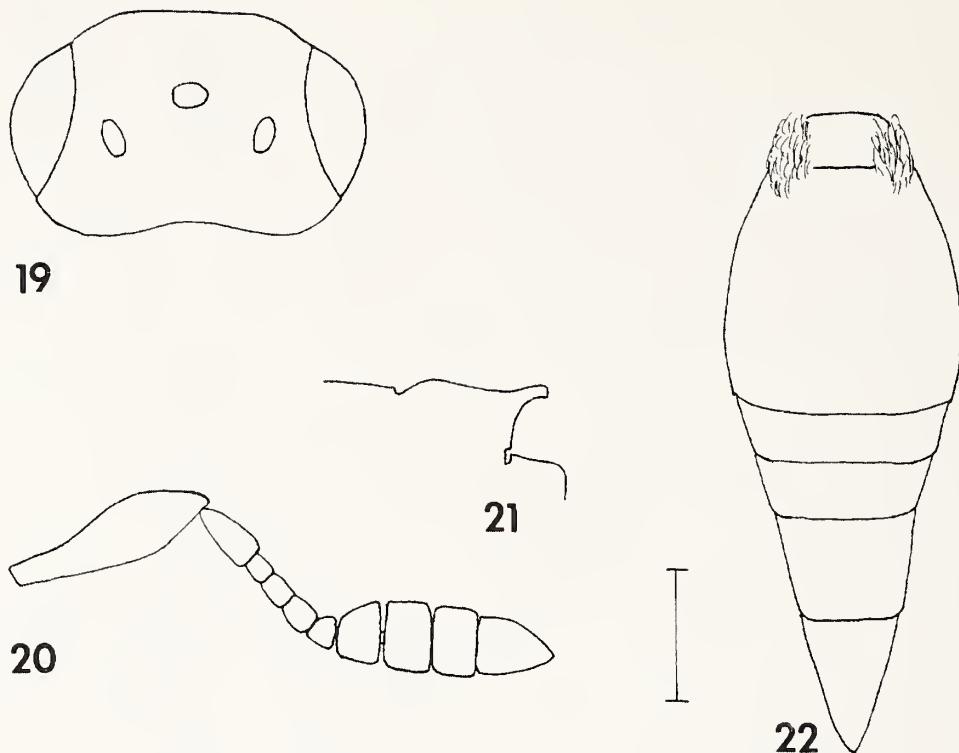
### *Synopeas guatemalae* sp. nov. (figs. 19–22)

Material examined. Holotype ♀: Guatemala, Solola, Panajachel, 1580m, 12.XI.1991 (R. Baranowski).

Description. Female: Length 1.0 mm. Colour black; A1 and legs almost uniformly bright yellowish, A2-A6 and apex of hind tibia brownish yellow; A7–A10 dark brown.

Head from above (fig. 19) 1.8× as wide as long, 1.25× as wide as thorax, dull, uniformly roughly reticulate-coriaceous, without occipital carina; lateral ocelli separated from eye by their longer diameter; OOL = 0.8 LOL. Head from front 1.2× as wide as high. Antenna (fig. 20) with A1 0.7× as long as height of head.

Mesosoma 1.6× as long as wide, 1.2× as high as wide. Sides of pronotum smooth in lower third, rest distinctly reticulate-coriaceous and with sparse hairs. Mesoscutum uniformly reticulate-coriaceous (finer than head, almost as pronotum), with sparse hairs and almost complete notauli which fade out shortly before reaching anterior margin of disc; mid lobe behind distinctly and narrowly pointed, reaching base of scutellum; scuto-scutellar grooves wide and hairy. Mesopleura smooth. Scutellum (fig. 21) with dense whitish hairs, spine and vertical lamella below slightly semitransparent. Metapleura with dense whitish pilosity except along narrow anterior margin. Propodeal carinae smooth, fused and slightly semitransparent.



Figs. 19–22. *Synopeas guatemalae* sp. nov. ♀: 19.—head, dorsal view, 20.—antenna, 21.—scutellum and propodeum, lateral view, 22.—metasoma, dorsal view (reference bar 0.10 mm).

Fore wing almost clear,  $0.75\times$  as long as body, slightly overreaching tip of metasoma,  $2.5\times$  as long as wide, with rather sparse hairs and no marginal cilia. Hind wing  $6.5\times$  as long as wide, marginal cilia 0.4 width of wing.

Metasoma (fig. 22)  $1.3\times$  as long as mesosoma,  $0.9\times$  as long as head and mesosoma combined,  $0.8\times$  as wide as thorax,  $1.1\times$  as wide as high. T1 medially smooth and bare, laterally with dense pilosity. T2 smooth, antero-laterally with numerous longitudinal striae reaching about 0.4 length of tergite. T3–T6 rather convex, hardly hairy; T3–T4 with dense punctures except along hind margin; T5–T6 with punctate rugosity all over.

Comments: This species, named after its country of origin, does not fit in Fouts' (1924) key to Nearctic species, especially due to sculpture of head and T3–T6. Among Neotropical species rather similar to the short original description of West Indian *Synopeas grenadensis* (Ashmead, 1895), but this species is smooth and shiny, without distinct scutellar spine, it has A1 and legs brownish yellow and metasoma longer and differently shaped than in *S. guatemalae*, cf. Ashmead (1895).

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